Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

Claims 1-55 (Canceled).

56. (New) A method for identifying small molecules relevant to a nervous system disorder, comprising:

obtaining a small molecule profile of a subject suffering from a nervous system disorder; and

comparing the small molecule profile to a standard small molecule profile;

thereby, identifying the small molecules relevant to said nervous system disorder.

57. (New) The method of claim 56, wherein said nervous system disorder is a neurogenerative disorder.

58. (New) The method of claim 56, wherein said nervous system disorder is neuropathy, Alzheimer disease, Parkinson's disease, Huntington's disease, amyotropic lateral sclerosis, motor neuron disease, traumatic nerve injury, multiple sclerosis, acute disseminated encephalomyelitis, acute necrotizing hemorrhagic leukoencephalitis, dysmyelination disease, mitochondrial disease, migrainous disorder, bacterial infection, fungal infection, stroke, aging, dementia, peripheral nervous system diseases and mental disorders such as depression or schizophrenia.

59. (New) The method of claim 58, wherein said nervous system disorder is amyotropic lateral sclerosis.

60. (New) The method of claim 56, wherein said subject is a human.

61. (New) The method of claim 56, wherein said small molecule profiles are obtained from said subject's blood, spinal fluid, serum, cells, tissue, or cellular organelles.

62. (New) The method of claim 61, wherein said cellular organelle is a mitochondria.

63. (New) The method of claim 56, wherein said small molecule profiles are obtained using one or more of the following: HPLC, TLC, electrochemical analysis, mass spectroscopy, refractive index spectroscopy (RI), Ultra-Violet spectroscopy (UV), fluorescent analysis, radiochemical analysis, Near-InfraRed spectroscopy (Near-IR), Nuclear Magnetic Resonance spectroscopy (NMR), and Light Scattering analysis (LS).

64. (New) A method for identifying small molecules relevant to amyotropic lateral sclerosis, comprising:

obtaining a small molecule profile of a subject suffering from amyotropic lateral sclerosis; and

comparing the small molecule profile to a standard small molecule profile;

thereby, identifying the small molecules relevant to amyotropic lateral sclerosis.

65. (New) A method for identifying small molecules relevant to amyotropic lateral sclerosis, comprising:

obtaining a small molecule profile of a subject suffering from amyotropic lateral sclerosis using one or more of the following technique, HPLC, electrochemical analysis, mass spectroscopy, and Nuclear Magnetic Resonance spectroscopy; and

comparing the small molecule profile to a standard small molecule profile;

thereby, identifying the small molecules relevant to amyotropic lateral sclerosis.

66. (New) A method for metabolomically facilitating the diagnosis of a nervous system disorder of a subject, comprising:

obtaining a small molecule profile from a subject suspected of having and/or having a nervous system disorder; and

comparing the small molecule profile from the subject to a standard small molecule profile, thereby diagnosing the nervous system disorder.

67. (New) A method for metabolomically predicting whether a subject is predisposed to having a nervous system disorder, comprising:

obtaining a small molecule profile from the subject; and

comparing the small molecule profile from the subject to a standard small molecule profile, thereby predicting whether a subject is predisposed to having a nervous system disorder.

68. (New) A method for metabolomically monitoring the effectiveness of a therapeutic agent in clinical trials, comprising:

obtaining a small molecule profile from a subject in a clinical trial being treated with a therapeutic agent; and

monitoring changes in the small molecule profile of the subject as an indication of the effectiveness of the therapeutic agent in the subject, thereby monitoring the effectiveness of said therapeutic agent, wherein said subject is suffering from or at risk of suffering from a nervous system disorder.

69. (New) The method of claim 66, 67, or 68, wherein said subject is a human.

70. (New) The method of claim 66, 67, or 68, wherein said nervous system disorder is a neurodegenerative disorder.

71. (New) The method of claim 66, 67, or 68, wherein said nervous system disorder is neuropathy, Alzheimer disease, Parkinson's disease, Huntington's disease, amyotropic lateral sclerosis, motor neuron disease, traumatic nerve injury, multiple sclerosis, acute disseminated encephalomyelitis, acute necrotizing hemorrhagic leukoencephalitis, dysmyelination disease, mitochondrial disease, migrainous disorder, bacterial infection, fungal infection, stroke, aging, dementia, peripheral nervous system diseases and mental disorders such as depression or schizophrenia.

72. (New) The method of claim 71, wherein said nervous system disorder is amyotropic lateral sclerosis.